

HP Virtual Connect 4.20

Release Notes

Abstract

This document provides Virtual Connect release information for version 4.20. This document supercedes the information in the documentation set released with version 4.10. This document is intended for the person who installs, administers, and troubleshoots servers and storage systems. HP assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.



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Update recommendation

Update Recommendation: Recommended

Supersede information

Supersedes: 4.10

Product models



IMPORTANT: This document may have references to products yet to be announced. For more information, contact your HP representative.

Virtual Connect 4.20 is supported on the following interconnect modules:

- HP VC Flex-10/10D Module
- HP VC FlexFabric 10Gb/24-port Module
- HP VC Flex-10 10Gb Enet Module
- HP VC FlexFabric-20/40 F8 Module
- HP VC 4Gb Fibre Channel Module for BladeSystem c-Class (enhanced NPIV)
- HP VC 8Gb 20-Port FC Module
- HP VC 8Gb 24-Port FC Module



IMPORTANT: Beginning with VC 3.70, the HP 1/10Gb VC Enet Module (399593-B22) and the HP 1/10Gb-F VC Enet Module (447047-B21) are no longer supported. Beginning with VC 4.10, the HP 4Gb VC-FC Module (409513-B21) is no longer supported.

Operating systems

The HP Virtual Connect version 4.20 firmware package operates in an embedded environment within each Virtual Connect module; therefore, it is not dependent on any operating system.

For more information, see the HP Operating Systems and Virtualization Software Support for ProLiant Servers web page on the HP website (<http://h18004.www1.hp.com/products/servers/software/index.html>), or

view the Operating Systems section for Integrity Servers on the HP website (<http://h20341.www2.hp.com/integrity/us/en/systems/integrity-systems-overview.htm>).

Languages

Languages supported for this release: English, Japanese

Enhancements

Version 4.20 of Virtual Connect contains support for the following enhancements:

- Manageability enhancements:
 - The sFlow feature allows network administrators to monitor and analyze the network traffic flow in the datacenter. The sFlow settings can be modified by users with Network, Domain, or Server user role permissions.
 - FIP snooping information display, which provides FCoE connectivity details for administrators.
 - CLI `show config` command, with the `includepoolinfo` option to save a configuration script that includes MACs, WWNs, and virtual serial numbers for your domain. For more information, see the *HP Virtual Connect Manager Command Line Interface for c-Class BladeSystem User Guide* on the HP website (<http://www.hp.com/go/vc/manuals>).
- The following HP products are now supported:
 - HP Virtual Connect FlexFabric-20/40 F8 Module
 - HP FlexFabric 20Gb 2-port 630FLB Adapter
 - HP FlexFabric 20Gb 2-port 630M Adapter
 - HP LPe1605 16Gb FC HBA for BladeSystem c-Class

Fixes

The VC 4.20 release resolves the following issues:

- DCBX traffic will not be sent on any VC uplink ports that are not capable of FCoE traffic. For more information, see related Customer Advisory c04173675 (<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c04173675>).
- VCEM is unable to add a domain containing profiles with user-defined Network Access Groups into a VC Domain Group. See Customer Advisory c0380654 (<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c0380654>).

- When manually removing an external-manager using the VCM CLI, if the Virtual Serial Number range is not properly specified, the server profile control will not be released from external management.
- When updating VC firmware to 4.10, VCSU activation may abort on other modules after the backup module is activated. See Customer Advisory c04122651 (<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c04122651>).
- VCM CLI hangs on the `show config` command when the SNMP read-only community string is null/blank.
- After upgrading the Virtual Connect firmware to version 4.10 on a VC domain that contains VC Fibre Channel 8Gb/20 port modules, some of the server blade HBAs may fail to log back into the SAN fabric. See Customer Advisory c04103189 (<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c04103189>).
- Some Fibre Channel statistics may be invalid on Virtual Connect FlexFabric modules running firmware version 4.10. See Customer Advisory c04117141 (<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c04117141>).
- Stacking link DAC cables fail after firmware upgrade.
- CLI command `reset statistics` with `encX:Y:*` wildcard does not work.
- Cannot "Reset Statistics" from GUI on FlexFabric FC connections.
- Profiles may not display correctly in the VCM Web UI when they are created via VCM CLI and the `SharedServerVlanID` is set to false.
- VC-FC 8/24 modules may unexpectedly reboot due to a software fault when an HPUX HPVM is in use on blades in the same enclosure.
- Browsers can remember the `cryptKeyrestore` password.
- In HP SIM, when a Managed Report is run against VC-FC modules, the returned description for the modules appear as NULL or as the serial number of the module.
- The detailed port statistics field `cosq[N]_ucast_DroppedPkts` incorrectly reports the number of per CoS queue dropped packets on HP VC FlexFabric 10Gb/24-port Modules and HP VC Flex-10 10Gb Enet Modules.
- After an enclosure import or recovery, profiles that enter a pending state could encounter an FCoE SAN outage with FlexFabric 10Gb/24 Port Modules.

Issues and workarounds

Issue

Configbackup restore fails in configuration with Multiple Enclosure after upgrading from VC 2.xx to VC 4.20.

Workaround

HP recommends customers with an ME environment upgrade from VC 2.xx to an intermediate firmware version, such as VC 3.70 or VC 4.10, and then upgrade to VC 4.20.

Issue

VC shows a profile pending when a VC module is removed and inserted.

Workaround

The customer must power cycle the server in a maintenance window to clear the status.

Issue

A server using an HP FlexFabric 20Gb 2-port 630FLB/630M Adapter and configured to use Ethernet Jumbo frames may experience lower FCoE throughput if server traffic is oversubscribed (that is more than 20Gb) over the FlexFabric Adapter port and the server is only reading disks without writing them. This is because of Ethernet traffic consuming excess bandwidth.

Workaround

Configure the server to use standard 1500 byte MTU frames. Alternatively, ensure that server traffic (FCoE + Ethernet) doesn't oversubscribe the port bandwidth of 20Gb.

Issue

If a single server is passing FCoE traffic and port monitoring is enabled, the FCoE traffic rate can drop significantly.

Issue

The VCM GUI does not redirect to the correct IP after a VC failover.

Workaround

The next failover succeeds without any issues. Refreshing the browser or closing and opening a new session redirects the browser to the correct IP address.

Issue

Errors are received when changing an FCoE network to a different module in a VCEM environment.

Workaround

The customer must revert the changes, and then complete or cancel the domain maintenance mode. If the uplink must be changed to a different module, the customer can delete the existing network, and then re-create the network with the same name, but use different uplinks.

Issue

After configuring LDAP authentication, users logging in that do not have Domain role permissions receive an error when attempting to access the Local Users page. The error is only a notification because Local Users settings cannot be modified by users who do not possess Domain role permissions.

Issue

If an HP ProLiant BL870c i2 Server is present in bays 3 and 4 of a C3000 enclosure, then the Hardware Overview page in VC Manager does not display the correct graphical picture of the server. VC Manager manages the server properly. It is only the graphical image that is incorrect.

Issue

In a VC domain with a VC profile assigned to a HP ProLiant BL2x220 Server Blade, when the I/O module connected to the dual-technology port is replaced with a module using single-blade technology, the OA

detects that the identity of the server changed, but VC does not detect the change. As a result, the OA does not power on the server blade until VC updates the server configuration.

Workaround

To resolve the problem, unassign and reassign the profiles to the two server bays (for example, Bays 1a and 1b), perform a hot-plug install of the server, or simulate a hot-plug install of the server using the OA reset server command. The problem can also be resolved if VC restarts, fails over, reboots, receives a firmware update, or re-evaluates the server after an OA failover.

Issue

Under certain circumstances, the checkpoint status icon in the GUI persists for a long time and is not cleared. The CLI also shows a "Checkpoint Status: Invalid" status in the show domain command output. This condition occurs periodically after a VCSU firmware upgrade of the VC module firmware.

Workaround

To resolve this issue, reset VCM on the primary module or reset the primary module using the OA.

Prerequisites

- VC SR-IOV prerequisites:
 - Supports the following adapters:
 - HP Flex-10 10Gb 2-port 530FLB Adapter
 - HP FlexFabric 10Gb 2-port 534FLB Adapter
 - HP Flex-10 10Gb 2-port 530M Adapter
 - HP FlexFabric 10Gb 2-port 534M Adapter
 - HP NC552m Flex-10 Adapter
 - HP NC553m 10Gb 2-P FlexFabric Converged Network Adapter
 - HP FlexFabric 10Gb 2-port 554M Adapter
 - HP Flex-10 10Gb 2-port 552M Adapter
 - HP FlexFabric 10Gb 2-port 554FLB Adapter
 - HP FlexFabric 20Gb 2-port 630FLB Adapter
 - HP FlexFabric 20Gb 2-port 630M Adapter
 - Supports the following operating systems:
 - Windows 2012 (64-bit)
 - VMware ESXi 5.1 U2, 5.5 (64-bit)
 - RHEL 5.9 and 5.10 (64-bit with KVM)
 - RHEL 6.4 and 6.5 (64-bit with KVM)
 - SLES 11 SP2, SP3 (64-bit with KVM)
- The lowest VCEM 7.3.0 support compatibility mode is set to VC 3.30.

- If you are planning to use VC 4.20 firmware in a VCEM environment, HP recommends upgrading to VCEM v7.3.0. For more information about the VC firmware that is compatible with VCEM, see the *Virtual Connect Enterprise Manager User Guide* on the HP website (<http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&lang=en&cc=us&docIndexId=64179&taskId=101&prodTypeId=18964&prodSeriesId=3601866>).
- Customers using Insight Control for VMware vCenter Server should upgrade to version 6.3 when using Virtual Connect firmware version 3.30 and later. Version 6.3 fixes a known issue with version 6.2 where Virtual Connect data did not display correctly.
- The Virtual Connect GUI requires a minimum of 512 MB of available memory to operate efficiently.
- To operate with HP VC 8Gb 20-Port FC Modules, all HP Emulex LPe 1205 8Gb FC HBAs that are revision A (identified by label EDC A-4904) must perform a CFL region 19 flash update. For download and installation instructions, see the LPe 1205 product page on the HP website (<http://www.hp.com>).
- Virtual Connect Manager version 4.20 requires Adobe Flash Player 11.1.x or higher before you can log in. HP recommends updating to Adobe Flash Player 11.5 or higher for Windows and 11.2 for Linux systems.

The recommended Adobe Flash Player web browser plug-in can be downloaded and installed from the Adobe website (<http://get.adobe.com/flashplayer/>), or downloaded as a standalone executable from the Adobe website (<http://www.adobe.com/downloads>).

For the latest Adobe Flash Player Security Bulletin Updates, see the Adobe website (<http://www.adobe.com/support/security/index.html#flashplayer>).

- When VC 4.10 is configured in "IPv6 Only" mode, the OA "Enclosure IP Mode" must also be configured through the OA CLI or OA GUI. However, you must ensure that any OA IPv4 addresses are cleared or the VC module cannot function correctly. To recover, clear any OA IPv4 addresses using the OA CLI or OA GUI, and then reset the VC module. For more information, see the "Enabling IPv6 support" section in the *HP Virtual Connect for c-Class BladeSystem Version 4.20 User Guide* in the Virtual Connect Information Library (<http://www.hp.com/go/vc/manuals>).

Installation instructions

Two options are available for VC firmware update:

- **HP BladeSystem c-Class Virtual Connect Support Utility**
HP recommends that you always use the latest version available. For more information about VCSU, see the HP BladeSystem c-Class Virtual Connect Support Utility release notes in the Virtual Connect Information Library (<http://www.hp.com/go/vc/manuals>). To download the VC firmware and the VCSU utility, view the BladeSystem for ProLiant Release Set Compatibility Table on the HP website (<http://www.hp.com/go/bladestemupdates>) and select the appropriate download.
- **HP Service Pack for ProLiant**
SPP is the replacement product for Insight Foundation (PSPs, Smart Update Firmware DVD, and other systems software). To download the update, see the HP Service Pack for ProLiant website (<http://www.hp.com/go/spp>).



IMPORTANT: VC 4.20 is contained in *HP Maintenance Supplement Bundle for SPP 2014.02.0, version 2014.04*. HP recommends updating to VC 4.20 by using *HP Maintenance Supplement Bundle for SPP 2014.02.0, version 2014.04*. VC 4.20 also supports SPP 2014.02.0 and SPP 2013.09.0 (B), but only for the features that are compatible between VC 4.20 and the corresponding SPPs. The VC 4.20 firmware can be downloaded separately from the HP website. HP also recommends using the most current updates for the firmware and drivers subsequent to the 2013.09.0 (B) release. When available, they can be obtained from the HP Single Point of Connectivity Knowledge (SPOCK) website (<http://www.hp.com/storage/spock>). The link to Virtual Connect is under the category "Other Hardware" in the list of selections on the left.

Firmware upgrade requirements



IMPORTANT: When updating VC firmware, update each domain with the entire firmware package, which includes the individual VC-Enet and VC-FC firmware. Updating only the VC-Enet firmware or only the VC-FC firmware is not supported.



IMPORTANT: For VC 4.20 upgrades when Virtual Connect Enterprise Manager (VCEM) is in use, HP recommends upgrading to VCEM v7.3.0. For more information about the VC firmware that is compatible with VCEM, see the latest version of the *Virtual Connect Enterprise Manager User Guide* on the HP website (<http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&lang=en&cc=us&docIndexId=64179&taskId=101&prodTypeId=18964&prodSeriesId=3601866>).

Each HP Virtual Connect firmware package contains a separate HP VC-FC firmware version. The following tables show the version of VC-FC firmware included with each VC firmware package.



IMPORTANT: When upgrading the HP VC 4Gb FC firmware from version VC-FC 1.2x to version VC-FC 1.4x, the VC-FC module can drop connectivity temporarily during the activation process. A redundant customer configuration experiences a failover with no loss of application connectivity to the fabric.

Virtual Connect firmware	VC 4Gb FC firmware within Virtual Connect	VC 8Gb 20-Port FC firmware within Virtual Connect	VC 8Gb 24-Port FC firmware within Virtual Connect
v1.31	1.20	—	—
v1.32, v1.34	1.21	—	—
v2.01, v2.02	1.30	—	—
v2.10, v2.12	1.32	1.32	1.00
v2.30–v2.33	1.40	1.40	1.01
v2.34	1.41	1.41	1.01
v3.0x	1.40	1.40	1.02
v3.10, v3.15	1.41	1.41	1.03
v3.17, v3.18	1.41	1.41	1.04
v3.30	1.42	1.42	1.04
v3.51, v3.60, v3.70	1.43	1.43	1.04
v3.75	1.44	1.44	1.04
v4.01	1.44	1.44	1.05
v4.10	2.00	2.00	1.10
v4.20	2.01	2.01	1.11

The following table shows firmware upgrade/downgrade support for the HP VC 4Gb FC Modules or HP VC 8Gb 20-Port FC Modules.

To VC Versions From	1.31	1.32, 1.34	2.01, 2.02	2.10, 2.12	v2.3x	3.0x	3.10, 3.15, 3.17, 3.18	3.30, 3.51, 3.60, 3.70, 3.75, 4.01, 4.10	4.20
VC 1.31	—	Normal	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*
VC 1.32/1.34	Normal	—	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*
VC 2.01/2.02	Fabric outage*	Fabric outage*	—	Normal	Normal	Normal	Normal	Normal	Fabric outage*
VC 2.10/2.12	Fabric outage*	Fabric outage*	Fabric outage*	—	Normal	Normal	Normal	Normal	Fabric outage*
VC 2.3x	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	—	Normal	Normal	Normal	Fabric outage*
VC 3.0x	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	—	Normal	Normal	Fabric outage*
VC 3.10/3.15/ 3.17/3.18	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	—	Normal	Fabric outage*
VC 3.30/3.51/ 3.60/3.70/3.75/ 4.01/4.10	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	—	Fabric outage*
4.20	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	Fabric outage*	—

* Always reset the module after the upgrade or downgrade.

On HP Virtual Connect 4Gb Fibre Channel Modules (with enhanced NPIV), downgrading the firmware to any version older than VC 2.10 is not supported.

Firmware version for HP BladeSystem for ProLiant

The firmware versions and software versions listed in this section have been tested as a solution set using *HP Maintenance Supplement Bundle for SPP 2014.02.0, version 2014.04* as a baseline, and are fully supported by HP. For Virtual Connect version 4.20, HP recommends the use of *HP Maintenance Supplement Bundle for SPP 2014.02.0, version 2014.04* with updates for specific components of the solution. For best results, follow the pre-deployment planning steps in the *HP Virtual Connect for c-Class BladeSystem Setup and Installation Guide* and the *HP BladeSystem ProLiant Firmware Management Best Practices Implementer Guide* on the HP website (http://h18004.www1.hp.com/products/servers/service_packs/documentation/index.html) to deploy the baseline set with component updates.

HP Service Pack for ProLiant is the replacement product for Insight Foundation (PSPs, Smart Update Firmware DVD, and other systems software). To download the update, see the HP Service Pack for ProLiant website (<http://www.hp.com/go/spp>).



CAUTION: HP recommends using the specific firmware and software versions listed together in *HP Maintenance Supplement Bundle for SPP 2014.02.0, version 2014.04* to ensure complete solution component compatibility and full functionality. These versions have been tested as a set. Using other version levels might result in operational issues.

Baseline Firmware Release Set

The contents of *HP Maintenance Supplement Bundle for SPP* is documented in the *HP Maintenance Supplement Bundle for SPP Release Notes* and *HP Maintenance Supplement Bundle for SPP Server Support Guide* on the HP website

(http://h18004.www1.hp.com/products/servers/service_packs/documentation/index.html).

Additional information

Versions 3.15 and higher of HP Virtual Connect Manager check the server ROM image version and display an incompatible state only for server blades that have a VC Server Profile assigned and are using incompatible server ROM versions.

Virtual Connect does not have the capability to perform version checking of the mezzanine card firmware. Validate this information through server POST for mezzanine support utilities.

Server blades and mezzanine cards that do not meet the required firmware versions do not accept Virtual Connect-assigned parameters such as MACs and WWNs properly and therefore maintain factory defaults. However, these server blades do have the Ethernet network and Fibre Channel fabric connectivity specified in their Virtual Connect server profiles. This connectivity enables you to use network-based firmware update tools for server blade and mezzanine firmware updates.

For Virtual Connect Fibre Channel and FlexFabric modules, the supported firmware and OS drivers are listed in the HP Single Point of Connectivity Knowledge (SPOCK) website (<http://www.hp.com/storage/spock>). The link to Virtual Connect is under the category "Other Hardware" in the list of selections on the left.

Firmware version for HP BladeSystem for Integrity

To obtain HP BladeSystem Release Sets for Integrity, see the HP website (<http://h18004.www1.hp.com/products/blades/integrity-release-sets.html>).

Important notes

- A serious issue that could cause a network outage when upgrading directly from VC 2.xx release version to VC 4.20 release in a Multi-Enclosure environment. Upgrade from VC 2.xx to VC 3.70 or VC 4.10 first, and then upgrade from VC 3.70 or VC 4.10 to VC 4.20 in a Multi-Enclosure setup.
- At a minimum, use of IPv6 requires the SPP 2013.09.0 (B) release. The minimum OA firmware version required is 4.01, and the minimum iLO 4 firmware version required is 1.30.
- FCoE protocol, which includes FIP Snooping, is not supported on uplinks with SFP-LR transceivers.
- Any configuration using Integrity server blades should only use OA firmware version 3.60. For more information, see the HP website

(https://h20566.www2.hp.com/portal/site/hpsc/template.PAGE/public/kb/docDisplay/?docId=emr_na-c03613140).

- When connecting a Virtual Connect FlexFabric 10Gb/24-port Module directly to 3PAR storage systems in the VC multi-enclosure environment, a server profile migration of a SAN-booted server between enclosures is not supported. Similarly, in the domains managed by Virtual Connect Enterprise Manager (VCEM), a server profile migration of a SAN-booted server between enclosures is not supported.
To perform a server profile migration of a SAN-booted server between enclosures directly attached to a 3PAR storage system in the VC multi-enclosure environment, the following manual steps are required:
 - a. Power off the server.
 - b. Un-assign the server profile.
 - c. Change the Primary and Secondary Target WWNs in the FC Boot Parameters section of the profile to reflect the WWNs of the 3PAR storage array ports directly connected to the destination enclosure.
 - d. Assign the profile to the destination location.
 - e. Power on the destination server.
- Although the GUI enables the selection of SNMP v2 traps, the VC 4Gb FC Module and the VC 8Gb 20-Port FC Module remain as v1 traps.
- During OA failover or other management network disruptions, VC SNMP traps might not reach the management station.
- Changes in the server RBSU can override Virtual Connect server profile settings for PXE (enabled or disabled). If you make a change in RBSU, that change is not reflected in Virtual Connect Manager. If you set PXE through RBSU, HP recommends using the "Use-BIOS" setting.
- The latest version of the VC-specific MIBs, 9.50 or higher, can be downloaded from the HP Systems Insight Manager "MIB Kit" site on the HP website (<http://h18006.www1.hp.com/products/servers/management/hpsim/mibkit.html>).
The LLDP-MIB and LLDPv2 MIB files can be downloaded directly from IEEE:
 - LLDP-MIB (<http://www.ieee802.org/1/files/public/MIBs/LLDP-MIB-200505060000Z.txt>)
 - LLDP-V2-MIB (<http://www.ieee802.org/1/files/public/MIBs/LLDP-V2-MIB-200906080000Z.txt>)
 - LLDP-V2-TC-MIB (<http://www.ieee802.org/1/files/public/MIBs/LLDP-V2-TC-MIB-200906080000Z.txt>)
- To access Virtual Connect documentation for current and past releases, see the HP website (<http://h18004.www1.hp.com/products/blades/components/c-class-tech-installing.html>).

Acronyms and abbreviations

ALB

adaptive load balancing

CNA

Converged Network Adaptor

DAC

direct attach cable

DCC

device control channel

DHCP

Dynamic Host Configuration Protocol

FCoE

Fibre Channel over Ethernet

FIPS

Federal Information Processing Standard

FLOGI

fabric login (Fibre Channel)

IGMP

Internet Group Management Protocol

LACP

Link Aggregation Control Protocol

LLDP

Link Layer Discovery Protocol

LUN

logical unit number

MIB

management information base

OA

Onboard Administrator

QoS

Quality of Service

SPP

HP Service Pack for ProLiant

SSL

Secure Sockets Layer

TLB

transmit load balancing

VC

Virtual Connect

VCEM

Virtual Connect Enterprise Manager

VCM

Virtual Connect Manager

VCSU

Virtual Connect Support Utility

WWN

World Wide Name

Related information

Virtual Connect Enterprise Manager support

For information about the VC firmware that is compatible with VCEM, see the latest version of the *Virtual Connect Enterprise Manager User Guide* on the HP website

(<http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&lang=en&cc=us&docIndexId=64179&taskId=101&prodTypeId=18964&prodSeriesId=3601866>).

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